REQUEST FOR RECONSIDERATION	Application #	10/562,394
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	First Inventor	NORTON
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	Examiner	King, Felicia C.
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Commissioner for Patents
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S I R:

In response to the Office Action dated December 19, 2008, Applicants submit the following Request for Reconsideration.

Claims 1-41 are pending in the present application. Applicants respectfully request that the Examiner reconsider the rejections in view of the foregoing and find all claims allowable.

As an initial point, Applicants greatly appreciate the Examiner conducting a personal interview with their representative, Mr. Stephen Weyer, on February 5, 2009. In accordance with that interview, Applicants submit a Rule 132 Declaration by co-inventor, Mark Norton (hereinafter "Norton Decl."), providing evidence of the non-obviousness of the present invention over the prior art. The Declaration is submitted unsigned and the executed Declaration will be submitted in due course once received from Mr. Norton.

Claims 1-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,867,992 (hereinafter "Boniello") in view of U.S. Patent No. 4,311,720

(hereinafter "Marmo"), individually or in combination with U.S. Patent No. 4,041,185 (hereinafter "Parliment"), U.S. Patent No. 4,698,264 (hereinafter "Steinke"), and U.S. Patent No. 6,299,926 (hereinafter "Balakrishnan"). Specifically, it was alleged that Boniello discloses roasted ground coffee having a "buttery" flavoring, diacteyl, added in an amount of 50 ppm to 400 ppm, but not linalool. However, the Examiner alleges that Marmo discloses linalool as a flavorant of hot beverages and tobacco products. The Examiner then alleges that it would have been obvious for one of ordinary skill in the art to add linalool to a coffee product, alleging that both diacteyl and linalool are both flavorants in hot beverages and, therefore, it would have been obvious to substitute linalool for diacteyl should one wish "to impart a fruity flavor instead of a buttery flavor" to a coffee product (see Office Action, parts 4-8, pages 3-4).

Contrary to the obviousness-type rejection, it would not have been obvious to one of ordinary skill in the art to add linalool to a coffee product (Norton Decl., ¶¶ 2-22). In order for two or more references to be combined in an obviousness-type rejection, there must be some apparent reason why one of ordinary skill in the art would have added to or subtracted from the closest prior art to arrive at the claimed invention and the result of the combination must have been predictable. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. __, 127 S.Ct. 1727 (2007). Such a reason for the combination may include some known benefit to one of ordinary skill in the art which would have resulted from the addition of linalool in a coffee product.

There fails to be any apparent reason why one would have found it desirable to have linalool in a coffee product. The resulting coffee product with linalool, as claimed, does not have a flavor which one would note as tasting like linalool (Norton Decl., ¶¶ 17

and 20). Further, it would have been unpredictable to one of ordinary skill in the art that adding linalool to coffee would produce a desirable beverage due to a coupling effect of flavors and a general unpredictable nature of knowing what effect adding one flavorant will have with other flavors present in coffee with regard to a final taste of the coffee product (Norton Decl., ¶ 16). Furthermore, had one wished to add a fruity-floral attribute to coffee, one would not have selected linalool, a previously considered, unimportant component in coffee and, moreover, undesired component/flavorant of coffee (Norton Decl., ¶ 9). Finally, prior to the present invention, one skilled in the art would not have been led to add a fruity-floral flavorant to a natural coffee product, as one would not have known that adding a fruity-floral flavor would provide any benefit in terms of taste to the coffee (Norton Decl., ¶¶ 9, 10, 11, 13 and 15). Therefore, the addition of linalool to coffee provides an unexpected and surprising result.

The present invention is directed to a novel discovery by the inventors, that consumer liking, i.e. taste preference, for a coffee product can be affected by the addition of a single naturally occurring component in coffee, linalool (Norton Decl., ¶ 2). The principle consumer sensory characteristics of coffee are its roast/bitterness and acidity, as determined by consumer sensory evaluations of numerous diverse coffee types (Norton Decl., ¶ 2). The flavor of coffee is the result of the coffee beans and roasting conditions used to produce the roast coffee blend (Norton Decl., ¶ 3). Coffee itself is a complex product which includes many compounds, in which only a few have been previously considered relevant to the taste and aroma of the final coffee beverage (Norton Decl., ¶ 4).

When processing coffee beans with the intent of positively affecting the intensity of one flavor attribute, commonly there is a negative affect on at least one other flavor attribute (Norton Decl., ¶ 6). This is attributed to the chemistry of coffee flavor compounds which undergo chemical reactions depending on the roast conditions (Norton Decl., ¶ 6). Furthermore, due to different chemical reactions and the roast conditions, it cannot be stressed enough that it is completely unpredictable as to what the effect altering even a single flavor, such as adding a flavorant, will have in the final coffee taste ((Norton Decl., ¶ 6).

Discovery of the present invention proceeded by first taking coffee compounds and identifying their respective contributions to specific sensory coffee attributes in order to access the importance of each attribute that each attribute contributes to consumer liking (Norton Decl., ¶ 10). In arriving at the present invention, the inventors developed a previously known method for determining how to enhance, degrade, or decouple several flavors and aromas by the addition of associated groups of coffee flavor components within a robust statistical design (Norton Decl., ¶ 10). This method permitted the inventors to assess consumer reaction towards enhanced levels of individual attributes and did not generate unfamiliar attributes within the context of pure coffee (Norton Decl., ¶ 10). As a result, the inventors were able to decouple coffee attributes in order to accurately access which flavor and aroma attributes contribute to consumer liking (Norton Decl., ¶ 10).

Through the inventors' experimentation, the inventors determined that a single chemical, linalool, which previously was not known to be of primary importance to effect or be associated with sensory attributes, let alone to be important at all in the overall

coffee flavor, drove significant consumer liking (Norton Decl., ¶ 11). More surprisingly was that linalool, previously identified as being undesirable (see Norton Decl., ¶ 9 and its Appendix C, Flament), actually drove significant consumer liking and, therefore, was desirable to be added to coffee, contrary to what was previously taught in the art, namely Flament.

More surprisingly, during the discovery of the present invention, the inventors discovered that linalool is present in coffee products which some coffee experts regard as high quality, e.g., Ethiopian Sidamo and Ethiopian Djimmah. As a result, it was determined that adding linalool to coffee having lower-linalool variance can produce a final coffee product having characteristics similar to more expensive and rare Ethiopian coffee (Norton Decl., ¶ 12).

Further surprisingly, the inventors determined that fruity and floral attributes drove consumer liking and that the component which had a significant effect on driving consumer liking was the presence of linalool (Norton Decl., ¶ 13). This was especially surprising in view of what was known in the art, e.g., as taught by Blank et al. (Norton Decl., Appendix B), which found that fruity/floral coffee compounds β-Damacenone and phenyl ethanol are important floral components in coffee and that linalool is not (Norton Decl., ¶ 13). Therefore, should one have wanted to provide a fruity/floral attribute to coffee, based on what was known in the art, one would have been led to add β-Damacenone or phenyl ethanol to produce the fruity/floral characteristic, not linalool (Norton Decl., ¶ 13).

It must be stressed that in the food art and, in particular, when considering effecting the taste and flavor of a food product, one must be mindful and consider the

effect that adding one or more flavorant will have on other compounds or components in the food to which the flavor(s) is/are added (Norton Decl., ¶ 16). As noted above, flavors are often coupled and, in most cases, it is completely unpredictable as to what effect adding one or more flavorant will have on the flavor of the resulting food product (Norton Decl., ¶ 16).

Prior to the present invention, the art of chemistry taught away from adding linalool to coffee (Norton Decl., ¶ 9 including its Appendix C (hereinafter "Flament")). Specifically, Flament clearly teaches that linalool provides an "undesired note in disharmony with the notes of roasted coffee" and, therefore, one of ordinary skill in the art would not have added linalool to a coffee product (Flament, p. 105, emphasis added).

Moreover, the resulting taste of the present coffee product to which additional linalool is added is not predictable. The resulting coffee product has what one would describe as a coffee flavor (Norton Decl., ¶ 12). For example, when linalool is added to a coffee blend identified by some as being of a lower quality, the resulting coffee has a taste which mimics that of a coffee blend which some identify as being of a higher quality (Norton Decl., ¶ 20). In any event, the resulting coffee product would not be characterized as having a "linalool" flavor. Linalool has been characterized as having a floral or sweet character (Norton Decl., ¶ 17). However, one would not attribute linalool with any particular flavor, such as lemon (Norton Decl., ¶ 17). Accordingly, one of ordinary skill in the art would not know what the resulting product flavor would be by adding linalool to a coffee product (Norton Decl., ¶ 19).

Furthermore, even if one would have desired a fruity/floral attribute in coffee, one would not have known that linalool would have produced a desired coffee product, let alone one which had a "linalool" flavor (Norton Decl., ¶ 19). Due to the coupling effect of flavor ingredients, and the number of different coffee components and flavor ingredients in coffee, one of ordinary skill in the art would not have had any reasonable expectation of success nor would have been able to predict that linalool would produce a desirable product (Norton Decl., ¶ 19). Prior to the present invention, it was unpredictable and unknown that adding linalool to coffee would be desirable at all (Norton Decl., ¶ 19).

Moreover, prior to the present invention, one would not have known how much linalool to add in order to drive consumer liking (Norton Decl., ¶ 20). Even if one would have thought it desirable to have a fruity/floral attribute to coffee, one would not have been enabled to know how much linalool to add in order to drive consumer liking (Norton Decl., ¶ 20). For example, if one would have added the 100 parts per 1000 flavorant, as disclosed in Marmo, one would not have found that the added linalool drove consumer liking at all (Norton Decl., ¶ 20). Therefore, even if one would have been led to add linalool, one would not have known how much linalool to add to produce a coffee product with improved consumer liking (Norton Decl., ¶ 20). Since the amount of linalool in Marmo would not have been considered to have improved liking or change the flavor of the coffee product, one would not have been led to increase the amount of linalool to have the claimed amounts (Norton Decl., ¶ 20).

Again, it must be stressed that adding linalool to coffee does not produce a "linalool" flavored product (Norton Decl., ¶ 20). The claimed amount of linalool does not

produce what one would describe as a lemon flavor, or in any way reflect the flavor of linalool (Norton Decl., ¶ 21). To the contrary, the coffee product resulting from the addition of the claimed amount of linalool would not be described by one of ordinary skill in the art as having a lemon flavor, although it does produce a fruity/floral attribute (Norton Decl., ¶ 21). Instead the resulting coffee product would be described or characterized by a consumer as having a natural coffee flavor (Norton Decl., ¶ 21). Therefore, one would not know how much linalool needs to be present in order to improve taste (Norton Decl., ¶ 20). In other words, the prior coffee art fails to enable one to know to add linalool to coffee, let alone to know how much to add (Norton Decl., ¶ 20).

Further, the amount of linalool added to a coffee product provides an unexpected benefit in that it allows one to add linalool to a coffee product which some may identify as being associated with a lower quality coffee to thereby mimic coffee attributes in a higher quality coffee (Norton Decl., ¶ 20). For example, linalool, at the claimed ranges, can be added to what may be characterized as a lower quality coffee blend to produce a coffee product with a taste which one would associate with a higher quality coffee blend (Norton Decl., ¶ 20). As a result, one can enhance the flavor of a coffee blend deemed by some to be of lower quality coffee to have the flavor of coffee deemed by some to be of higher quality coffee.

In conclusion, one of ordinary skill in the art would not have modified Boniello by replacing its flavorant diacteyl with the linalool disclosed in Marmo, as there fails to be any apparent reason why one would have found it desirable to have linalool in a coffee product. As discussed above, it was completely unpredictable as to what effect adding

linalool to a coffee product would have on the flavor of the resulting coffee. Moreover, the resulting flavor would not be identified as being the flavor of "linalool". Furthermore, one of ordinary skill in the art would not have predicted that the presence of linalool would have been beneficial. To the contrary, the prior art, e.g., Flament (Norton Decl., Appendix C), clearly teaches that the presence of linalool is undesirable. Consequently, one of ordinary skill in the art would not have been led to add linalool to a coffee product. Further, due to the linked nature of flavorants, it would have been unpredictable that linalool would have produced a desirable coffee product. Therefore, there fails to be any apparent reason why one of ordinary skill in the art would have added linalool to a coffee product.

Based on the foregoing, Applicants respectfully submit that claims 1-41 are not obvious from Boniello and Marmo, individually or in combination with the other cited prior art.

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance.

Respectfully submitted,

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